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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/673,738	10/20/2000	Fumio Takahashi	Q61378	3763

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EXAMINER	
MAKI, STEVEN D	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/673,738	TAKAHASHI, FUMIO
	Examiner	Art Unit
	Steven D. Maki	1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-20 and 22* is/are pending in the application.

4a) Of the above claim(s) *1 and 3-7* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-20 and 22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1) **Upon reconsideration and in view of the new second and first paragraph 112 rejections (set forth below), the indication of allowable subject matter in paragraph 9 of the last office action dated 12-12-03 is withdrawn.**

2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3) Claims 8-20 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8, the scope and meaning of the combination of the peripheral protuberant portion subject matter described at lines 4-8 and the chamfer portion subject matter described at lines 9-13 is unclear. In particular, it is unclear if (1) the peripheral protuberant portion and the chamfer portion are separate and mutually exclusive structural features of the tread or (2) the peripheral protuberant portion comprises the subject matter of the chamfer portion. The separate description of the "peripheral protuberant portion" and "chamfer portion" in claim 8 indicates that the former is intended. However, the original disclosure *appears* to indicate that the latter is being claimed. Stated differently, claim 8 describes "at least a portion of a block edge is chamfered" (line 9 / emphasis added). It is unclear if the "block edge" (line 9) described with respect to the chamfer portion is the same or different from the "block end edge" (line 6) described with respect to the peripheral protuberant portion. It is unclear if the description of "the height of the block gradually and continuously decreases ... to the block end edge" and the description of "at least a portion of a block edge is chamfered

... to a groove wall surface of each of the blocks" are describing the same subject matter (i.e. the same structural feature of the tread). In other words, it is unclear if the "limitation" of the increasing angle is describing the "gradually and continuously" decreasing height or something else.

4) The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5) Claims 8-20 and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims 8-20 and 22, the subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention is the combination of the peripheral protuberant portion subject matter described at lines 4-8 of claim 8 and the chamfer portion subject matter described at lines 9-13 of claim 8. The original disclosure adequately describes the chamfer portion. See for example page 4 first full paragraph and description of figures 1-5. Figure 1 illustrates chamfer portion 24. The original disclosure adequately describes the peripheral protuberant portion. See for example first full paragraph at page 6 and description of figure 8. Figure 8 illustrates peripheral protuberant portion 26. None of the figures of the original disclosure illustrate

the combination of the chamfer portion 24 and the peripheral protuberant portion 26. The only support in the original disclosure for this combination subject matter is found at original page 6. At lines 2-4 of page 6, the original disclosure states "The invention in claim 8 is characterized in that, the invention described in any one of claims 1 to 7 [the original disclosure teaching at page 4 that claim 1 describes a chamfer portion], a peripheral protuberant portion is formed ...". The original disclosure fails to describe *how* those two apparently separate structural features of the tread are combined in a single block. The original disclosure for example does not describe a "first embodiment" of chamfering the peripheral protuberant portion. The original disclosure does not describe a "second embodiment" of forming only a chamfer portion at one edge of the block and forming only a peripheral protuberant portion at a different edge of the block. The original disclosure does not describe a "third embodiment" of the curved portion defined by distances LL1 and HH1 in figure 8 as being defined by changing angle theta and thereby constituting the chamfer portion. The original disclosure describes height H0 - H1 of the chamfer portion as being 0.1 to 2.5 mm (page 29). The original disclosure describes the height HH1 of the peripheral protuberant portion as being 0.1 to 2.5 mm (page 31). Since the range for height H0-H1 is the same as the range HH1, is page 6 lines 2-4 correctly interpreted as meaning that the "third embodiment" is being described? If not, why not?

6) The disclosure is objected to because of the following informalities: The specification refers to the claims. See for example pages 9-20. It is suggested to appropriately delete the references to the claims. Appropriate correction is required.

7) The following rejections are made in view of the above 112 rejections. They are based on the following interpretation of the claims: The gradually and continuously decreasing height of the block (lines 5-6) is defined by the specified angle (line 10).

8) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Matsepuro / transversely extending edges

10) **Claims 8-10 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsepuro (WO 93/21028).**

Matsepuro discloses a tire having a tread comprising a row of blocks 14 which are "demarcated by circumferential grooves extending in a circumferential direction of the tire and grooves intersecting the circumferential grooves". See figure 13. Matsepuro teaches that the thrust surfaces of the blocks can be straight, concave or convex or a combination of these. See abstract. The tire has improved grip on soft ground. See abstract. Matsepuro illustrates a block having a "peripheral protuberant portion" at the leading and trailing edges thereof (both sides of the block in the circumferential direction) wherein "the height of the block gradually and continuously

decreases from a top of the peripheral portion to the block end edge and from the top of the peripheral protuberant portion to a maximum depth portion in a central region of the block". See figure 6.

As to claims 8 and 22, the claimed peripheral protuberant portion reads on the peripheral protuberant portion shown by Matsepuro in figure 6. Since Matsepuro illustrates the tire having a casing in figure 1, one of ordinary skill in the art would have readily understood that Matsepuro's tire is a pneumatic tire. The subject matter relating to the increasing angle theta reads on curved portion between the top of the peripheral protuberant portion and the groove wall. It is noted that an increasing angle theta as described in claim 8 reads on a convexly curved edge having one radius or plural radii.

As to claims 9 and 10, Matsepuro provides "peripheral protuberant portions at the end edges of the block in the circumferential direction", or in other words, "transversely extending peripheral protuberant portions".

11) **Claims 8-10, 12-19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsepuro (WO 93/21028).**

Matsepuro, which is described above, is considered to anticipate claims 8 and 22. In any event: It would have been obvious to one of ordinary skill in the art to provide Matsepuro's tire as a pneumatic tire since Matsepuro shows providing the tire with a casing (figure 1) and a pneumatic tire having a casing is taken as a well known / conventional type of tire in the tire art. The limitation of each block being defined by circumferential grooves and other grooves and having the claimed peripheral protuberant portion would have been obvious to one of ordinary skill in the art since

(1) Matsepuro shows blocks 14 which are "demarcated by circumferential grooves extending in a circumferential direction of the tire and grooves intersecting the circumferential grooves" (figure 13) and (2) Matsepuro illustrates a block having a "peripheral protuberant portion" at the leading and trailing edges thereof wherein "the height of the block gradually and continuously decreases from a top of the peripheral portion to the block end edge and from the top of the peripheral protuberant portion to a maximum depth portion in a central region of the block" (figure 6).

The limitation of the subject matter relating to the increasing angle theta would have been obvious to one of ordinary skill in the art since Matsepuro forms a convexly curved portion between the top of the peripheral protuberant portion and the groove wall as shown in figure 6.

As to claims 12-19, the claimed dimensions would have been obvious and could have been determined without undue experimentation in view of (a) Matsepuro's teaching to shape the thrust surface 5 so as to improve grip on soft ground and (b) Matsepuro's teaching to provide the thrust surface with the shape shown in figure 6. In figure 6, each convex protuberant portion is illustrated as having a height less than length. Also, a relatively small height for each protuberant portion is indicated by Matsepuro's teaching that the figure 6 embodiment is an alternative to the figure 2 embodiment in which the block has a protuberant height of zero (i.e. has no protuberant portion).

German '427 / at least circumferentially extending edges

12) **Claims 8-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over German '427 (DE 3709427) in view of Hasegawa et al (US 5435364) and in view of at least one of Japan '111 (JP 7-257111), Japan '810 (JP 8-332810) and Marriott (US 6386253).**

German '427 discloses a tire having a tread including a circumferential groove 3 separating tread element 1 from tread element 2. German '427 discloses providing each tread element with narrow venting ribs 6. Each venting rib has a height of 0.3-0.5 mm. Each rib has a triangular cross section. The ribs are at the edges and arranged circumferentially and/or across the surface from the edges of the elements without those ribs. See abstract. Narrow ribs 6' are therefore optional. German '427 does not recite defining the blocks using circumferential grooves and transverse grooves. However, it would have been obvious to one of ordinary skill in the art to provide narrow ribs at the circumferentially extending edges of blocks defined by circumferential grooves and transverse grooves such that the height decreases as claimed since (1) German '427, directed to reducing noise of a tire tread, teaches forming circumferentially extending narrow ribs at the circumferentially extending edges of tread elements as flash from tire mold vents so that the resulting tire is quiet and (2) Hasegawa, directed to improving wet grip performance without deteriorating low noise performance, shows that it is well known / conventional in the tire art to provide a tire tread with tread elements in the form blocks defined by circumferential grooves and transverse grooves.

As to claims 8 and 22, the claimed peripheral protuberant portion reads on the ribs 6 of German '427. Claim 8 reads on and fails to exclude the maximum depth being defined by a relatively large flat upper block surface area. As to the increasing angle, it would have been obvious to form the ribs (projections) on the blocks such that the ribs (projections) at the circumferential edges have a convex / curved shape (instead of a triangular shape) in view of the suggestion from at least one of Japan '111, Japan '810 and Marriott to form a rib projection on a surface of a land portion of a tread such that it has a convex / curved shape. Japan '111, also forming projections on the surface of a tread, suggests configuring projections to have a convex shape (figure 3d) as an alternative to projections having a triangular shape (figure 3a). Japan '810, also directed to projections on a tread surface, suggests configuring rib projections such that each rib projection of the tread surface has a convex curved shape as shown in figure 6. Marriott suggests forming projections on the tread surface at the edges of a block such that the rib projection at each edge has a curved convex profile (figure 4)

As to claims 9 and 11, German '427's projections are located on the circumferential edges of the block.

As to claims 10 and 20, it would have been obvious to form the projections at the transverse edges of the block (claim 10) / entire peripheral edge of the block (claim 20) in view of Japan '810's teaching that projections on a tread surface may extend circumferentially or transversely to improve traction performance and/or Marriott's teaching to form projections at all edges of a block in order to improve venting (dispersing trapped air).

As to claims 12-19, the claimed dimensions would have been obvious and could have been determined without undue experimentation in view of German '427's teaching to provide the narrow rib with a height of 0.3-0.5 mm and a cross section widening from the top to the bottom thereof.

Remarks

13) Applicant's arguments with respect to claims 8-20 and 22 have been considered but are moot in view of the new ground(s) of rejection. This action is non-final since the new ground of rejection (the 112 rejection) was not necessitated by amendment.

Applicant's arguments filed 5-12-04 have been fully considered but they are not persuasive. The indication of allowable subject matter described in paragraph 9 of the last office action has been withdrawn in view of the above new 112 rejections.

14) No claim is allowed.

15) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
August 23, 2004

Steven D. Maki
STEVEN D. MAKI
PRIMARY EXAMINER
~~GROUP 1300~~
Au 1733

8-23-04